

**REMARKS**

Claims 21-29 and 36-45 are pending in the application. Claims 21-29 and 36-45 stand rejected in the referenced office action.

Independent claim 21 has been amended to specify that the directional sensitivity is obtained by using a switchable aperture on a shield. Support for this amendment is found at page 32 lines 3-22 and in Figures 23 and 24 of the application.

Dependent claims 22-24, and 26 have been amended to clarify the claim language.

Claims 27 and 28 have been canceled.

Claims 36 and 38 have been rewritten so they no longer have multiple dependency.

Claims 39-42 have been canceled.

Claim 43 has been amended to clarify the claim language.

Claims 44 and 45 have been canceled.

New method claim 46 has been added to specify that the directional sensitivity is obtained by using a magnetic lens. Support for this is found at page 33 lines 1-5 of the application.

New dependent method claims 47-49 have been added.

New independent apparatus claim 50 has been added. This is similar in scope to method claim 21.

New independent apparatus claim 51 has been added. This is similar in scope to method claim 46.

No new matter has been added by the amendments. Reconsideration of the application as amended is respectfully requested. The Examiner's objections and rejections are addressed in substantially the same order as in the reference office action,

**REJECTION UNDER 35 USC § 102**

Claims 21, 22 and 24-29 stand rejected under 35 USC § 102 over *Strack* et al. (US6147496). Claim 21 is an independent claim.

The invention of claim 21 is a method of determining a parameter of interest of an earth formation using a multi-component resistivity logging tool conveyed in a borehole in the earth formation. Selective sensitivity is obtained by using a switchable aperture on a shield of the logging tool.

As the Examiner has noted, *Strack* discloses a multicomponent resistivity logging tool which has directional sensitivity in the measurements. However, the tool of *IStrack* has antennas fixed with coils along the x-, y- and z- axis and does not disclose the use of a switchable antenna shield.

In order for a claimed invention to be unpatentable under 35 USC §102, a single prior art reference must disclose each and every element of the claim arranged as in the claim. This is clearly lacking in the present case. Accordingly, applicant respectfully submits that claim 21 and claims 22-26, 29, 37, 38 and 43 which depend upon claim 21 are patentable under 35 USC §102 over *Strack*.

Applicant further notes that none of the prior art of record teaches or suggests the use of a switchable aperture on a shield. As the Examiner has noted, *Clark* (US6297639) does disclose the use of a plurality of *fixed* apertures on a shield. There is, however, no

teaching or suggestion in *Clark* or the prior art of record of the use of a switchable aperture on an antenna shield.

In order to sustain a rejection under 35 USC § 103, two requirements must be met. First, the prior art of record must, when combined, teach all of the elements of the claimed invention. Secondly, there must be a teaching or motivation in the prior art of record to make such a combination,

The first requirement is clearly lacking in the present case. Accordingly, applicant respectfully submits that claim 21 and claims 22-26, 29, 37, 38 and 43 which depend upon claim 21 are patentable under 35 USC §103 over *Strack* and the prior art of record.

#### **REJECTION UNDER 35 USC § 103**

Claims 23 and 36 stand rejected under 35 USC § 103 over *Strack* in view of *Hagiwara et al.* (US6181138). The patentability of these claims has been addressed above in the discussion of the rejection under 35 USC § 102.

Claims 37-45 stand rejected under 35 USC § 103 over *Strack* in view of *Hagiwara* and further in view of *Clark* (US6297639). The patentability of these claims has been addressed above in the discussion of the rejection under 35 USC § 102.

#### **NEW CLAIMS**

New independent method claim 46 specifies the use of a magnetic lens for providing a selective sensitivity to the parameter of interest. Support for this is found in

Fig. 28 and the related discussion. Dependent claim 49 specifies the use of a printed circuit board. Support for this is found in Fig. 67 and the related discussion.

A review of the prior art of record fails to show teaching or suggestion of a magnetic lens as specified in claim 46. Accordingly, applicant respectfully submits that claim 46 and claims 47- 49 that depend upon claim 46 are also patentable under 35 USC §§ 102-103 over *Strack* and the prior art of record.

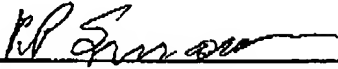
New independent claim 51 includes the substantive elements of method claim 21. Accordingly, claim 51 is patentable under 35 USC §§ 102-103 over *Strack* and the prior art of record for the same reasons that claim 21 is patentable under 35 USC §§ 102-103 over *Strack* and the prior art of record

New independent claim 52 includes the substantive elements of method claim 46. Accordingly, claim 52 is patentable under 35 USC §§ 102-103 over *Strack* and the prior art of record for the same reasons that claim 21 is patentable under 35 USC §§ 102-103 over *Strack* and the prior art of record

The Commissioner is hereby authorized to charge any fee and credit any overpayment associated with this response to Deposit Account No. 02-0429(414-15493-USD1).

Respectfully submitted,

Dated: 5 September 2006

  
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